

Introduction

The boundaries of teaching and learning in the preK–12 classrooms have been expanded, stretched, and blurred as we develop different approaches and pathways for reaching and teaching students. Designing and implementing rigorous and engaging experiences that move learning forward has always been, and will continue to be, the impetus behind what we do in our schools and classrooms. What has changed, and continues to change, is the context in which these experiences occur. For many of us, calculus moved to the couch, language arts to the living room, and physical education to the patio. Distance learning was the new normal.

Distance learning is what prompted the sudden expanding, stretching, and blurring of the boundary between home, classroom, and school. Distance learning has existed for a while in some contexts within education. Perhaps you remember when your teacher rolled the television into the classroom, and you watched current events in real time, such as a space shuttle launch or the 9/11 terrorist attacks. Or you may remember a science teacher flipping through your catalog of laserdiscs to display the perfect interactive visual of a beating heart to your students. Or perhaps you can remember a time when an expert “visited” your classroom via teleconferencing to lend their expertise to a lecture. Did you know that Chicago schools educated over 315,000 students for several weeks in 1937 via the radio due to the polio outbreak? Students tuned into different stations based on their grade level and there was a call center staffed by teachers to provide additional help. These various contexts have used some form of technology innovation, a departure from face-to-face instruction in which students received information from the teacher alone and engaged students in a different medium of receiving instruction.

But that changed as a result of COVID. As parents, guardians, and primary childcare providers, we found ourselves in the car loop picking up laptops, hotspots, books, and school meals. As teachers, we found ourselves attending ongoing professional learning, researching and leveraging available instructional technology to ensure continuity of learning, supporting our learners in finding, gathering, creating, and sharing information (see Figure I.1).

Finally, instructional leaders tackled the challenge of liaising between teachers and families to ensure learners had access to school and “logged on” to class.

While there are a variety of perspectives, there are data that suggest, by and large, we did what families, instructional leaders, teachers, and our students have done many times before. We stepped up to the challenge and made the best of the current situation (see Kuhfeld et al., 2020b). This same data points us in the direction of opportunities for growth and improvement. And that should be expected in any teaching and learning environment. After all, continuous improvement is the hallmark of expertise in teaching (Rickards, Hattie, & Fields, 2021). But the point we are trying to make is that,

**CONTINUOUS
IMPROVEMENT IS
THE HALLMARK OF
EXPERTISE IN TEACHING.**

I.1 FUNCTIONS AND TOOLS

Teacher wants students to	Student Engagement Opportunities	Sample Digital Resources
Find Information	<ul style="list-style-type: none"> • Can locate information sources • Can organize and analyze information sources for accuracy and utility to the task • Locating information is driven by curiosity and topic 	<ul style="list-style-type: none"> • Wakelet • Google/Google Scholar • Quizlet • Pear Deck • eBooks
Use Information	<ul style="list-style-type: none"> • Can cite sources of information • Makes judgments about how best to use information • Asks questions the information provokes 	<ul style="list-style-type: none"> • Evernote • OneNote • Flipgrid • Grammarly • PlayPosit • TurnItIn • Nearpod • Didax Math Manipulatives • Toytheater Virtual Manipulatives • Boomwriter
Create Information	<ul style="list-style-type: none"> • Can write and discuss information according to grade-level expectations • Transforms information in order to explore ideas new to the learner • Takes academic risks to innovate 	<ul style="list-style-type: none"> • GSuite for Education • Office 365 • ThingLink • iMovie • Padlet • Seesaw • Screencastify • Google Drawings • Jamboard • StoryboardThat
Share Information	<ul style="list-style-type: none"> • Accurately matches purpose to the audience • Uses metacognitive thinking to identify the best strategies for the stated purpose • Is resourceful and resilient 	<ul style="list-style-type: none"> • Animoto • Storybird • WeVideo • Jamboard • YouTube

Source: Adapted from Fisher, D., Frey, N., & Hattie, J. (2020). *The distance learning playbook, grades K–12: Teaching for engagement and impact in any setting*. Corwin.

while stressful, teachers and learners demonstrated that distance learning was possible. In fact, there are aspects of distance learning that we will bring back to face-to-face learning environments as lessons learned. The 21st century teaching and learning practices that teachers have adopted have elevated the conversation around integrating technology in the teaching and learning cycle. These lessons learned will pave the way for us to come back better.

But hold on a second. Here we go again! Teaching and learning exclusively on Zoom, Google Meets, or WebEx is one thing. Similarly, learners engaged in face-to-face learning in a socially distanced school and classroom, closer to what we are all comfortable and familiar with, have advantages and disadvantages. But teaching and learning in a school or classroom where some learners are “logged on” at the same time as some learners are face-to-face is yet another expanding, stretching, and blurring of the boundaries. In Atlanta, Georgia, this is referred to as *Roomies and Zoomies*. This *simultaneous learning environment* requires an entirely different conversation. And that is exactly the conversation we aim to have over the next six chapters—simultaneously teaching *Roomies and Zoomies*. Of course, there are other platforms that school systems use, but for ease of discussion, we will refer to Roomies and Zoomies to distinguish the various learning situations. Throughout this book, we use the evidence from Visible Learning® (www.visiblelearningmetax.com) to make our recommendations. We recognize that the vast majority of studies in this database were not conducted during distance learning (but some were), but we believe that the implications from the evidence are still important. In this database, the average effect size is 0.40. Thus anything over 0.40 is an above-average effect and should ensure that students are learning.

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TERMINOLOGY

Before we go any further into this conversation, we want to make sure we are clear on the terminology of what is often referred to as the grammar of schooling (Cuban, 1993). One of the outcomes or side effects of this expanded view of teaching and learning is the potential for us to get lost in the lingo. Let's begin with distance learning.

Distance learning. We use the term *distance learning* to refer to the broader context of teaching and learning through an online platform. Teachers and students engaged in distance learning are doing so completely through the use of Zoom, Google Meets, Microsoft Teams, WebEx, SeeSaw, Canvas, and Blackboard, for example. Neither the teacher nor the student needs to physically be in a school or on a campus. Within distance learning, however, is the option for synchronous and asynchronous learning. We use distance learning to describe situations in which students are learning remotely from the school building.

Synchronous learning. If teachers and students are engaged in teaching and learning in real time or live, they are learning synchronously. Synchronous learning involves a class or daily schedule that requires individuals to log on at a specific time for a predetermined duration. In Figure I.2, daily Zoom sessions are scheduled for 8:30 a.m. and 12:30 p.m. You may think synchronous learning includes face-to-face instruction. After all, learners in face-to-face learning get off the school bus and walk into classrooms



organized by class and daily schedules. The difference between these two contexts is the location. Synchronous learning does not occur in the same geographic location. Learners are at home, at the local Boys and Girls Club, or any other location.

I.2 CANVAS HOMEPAGE WITH SYNCHRONOUS AND ASYNCHRONOUS LEARNING SCHEDULE

1.0 Week 1 (Evidence for Evolution) Overview

Overview:

How do scientists know how organisms have changed over time? This week you will learn about the various lines of evidence that support evolution.

Unit Success Criteria:

How will I know I am learning?
Success Criteria
 I KNOW I AM SUCCESSFUL
 WHEN I CAN...

- ✔ Provide multiple pieces of evidence to explain common ancestry.
 - Describe the conditions necessary for evolution to occur via natural selection.
 - Explain how adaptations provide an advantage in a given environment.
 - Construct an explanation for how changes in the environment may result in speciation.

Zoom Schedule (Synchronous):	Finish by Friday (Asynchronous):
<p>Monday</p> <ul style="list-style-type: none"> □ 1.1 🗣️ Extinction Events Article <p>Tuesday</p> <ul style="list-style-type: none"> □ 1.3 🦜 Explore Your Inner Animal □ 1.5 🗣️ Scientists Grow 'Dinosaur Legs' on a Chicken for the First Time Article <p>Thursday</p> <ul style="list-style-type: none"> □ 1.6 🦜 Molecular Evidence for Evolution <p>Friday</p> <ul style="list-style-type: none"> □ 1.8 🦜 Sheep Eye Dissection 	<ul style="list-style-type: none"> □ 1.2 🗣️ When Will The Next Extinction Event Occur? Video □ 1.4 🗣️ B-Rex Video Discussion Board □ 1.7 🗣️ The Science of Skin Color PlayPosit □ Science Weekly #11: Evidence for Evolution □ Empowers- Week 1

Source: Courtesy of Kim Elliot. Image source: Cloud: Bigtunaonline/iStock.com

Asynchronous learning. Much like synchronous learning, asynchronous learning can occur in any geographic location. However, in an asynchronous environment, teachers provide a learning progression and the necessary resources for students to engage in the learning at their own pace and time. While there are time limits and due dates on this progression (i.e., one week to complete the tasks or “by the end of the day”), students are responsible for managing their own time and pace within the time limits and before the due dates. You will notice in Figure I.2 that there are tasks on the daily agenda that are asynchronous.

Face-to-face learning. This concept is well-known and reflects what we are most familiar with in preK–12 schools and classrooms. For the purposes of our conversation about

Roomies and Zoomies, we mean face-to-face learning to be when students and teachers meet at the same time in the same place, even if socially distanced.

Blended learning. The name says it all. In blended learning, students are engaged in both distance learning and face-to-face learning, but not at the same time. For example, learners may engage in distance learning for a particular course or during a day of the week and then in a face-to-face learning environment for other courses or on other days. When we discuss blended learning in this book, we are referring to this particular learning context. The idea of blended learning existed prior to the pandemic and was generally understood to mean that students had some control over the time, place, path, or pace of their learning. In this traditional model of blended learning, students use technology as a tool to help drive their own learning. But it was rare to have students learning at home during the day in a blended learning situation.

Hybrid learning. This term has been used to describe any number of different formats of school, and there is a lack of consensus about what this term really means. Generally speaking, hybrid learning is used to describe situations in which students learn part-time with a teacher in a physical school classroom and part-time online. Many students, pre-pandemic, experienced hybrid learning within the classroom as software programs delivered some of the learning experiences. By definition, hybrid learning does not require any remote learning time. And students may not have control over the time, place, path, or pace of their learning. Thus, we have adopted the term *simultaneous learning* to describe new ways to organize the learning experiences for students.

In some instances, school districts use hybrid and blended interchangeably. And many districts have introduced the term *remote learning* to identify when a student is learning in a setting other than the school.

Simultaneous learning. We define *simultaneous learning* as the combining of teaching some learners at a distance and others face-to-face learning in the same learning experience. As we mentioned previously, and you have likely experienced, simultaneous learning requires an entirely different conversation around the planning, developing, and implementing of rigorous and engaging experiences that move learning forward. Let's look at a few examples. Ms. Lewanowicz, a third-grade teacher at Cherrywood Elementary School, welcomes one-half of her class into room 6, where they engage in socially distanced, face-to-face learning. At the same time, the other half of her learners are logged on to Zoom and projected on the interactive whiteboard.

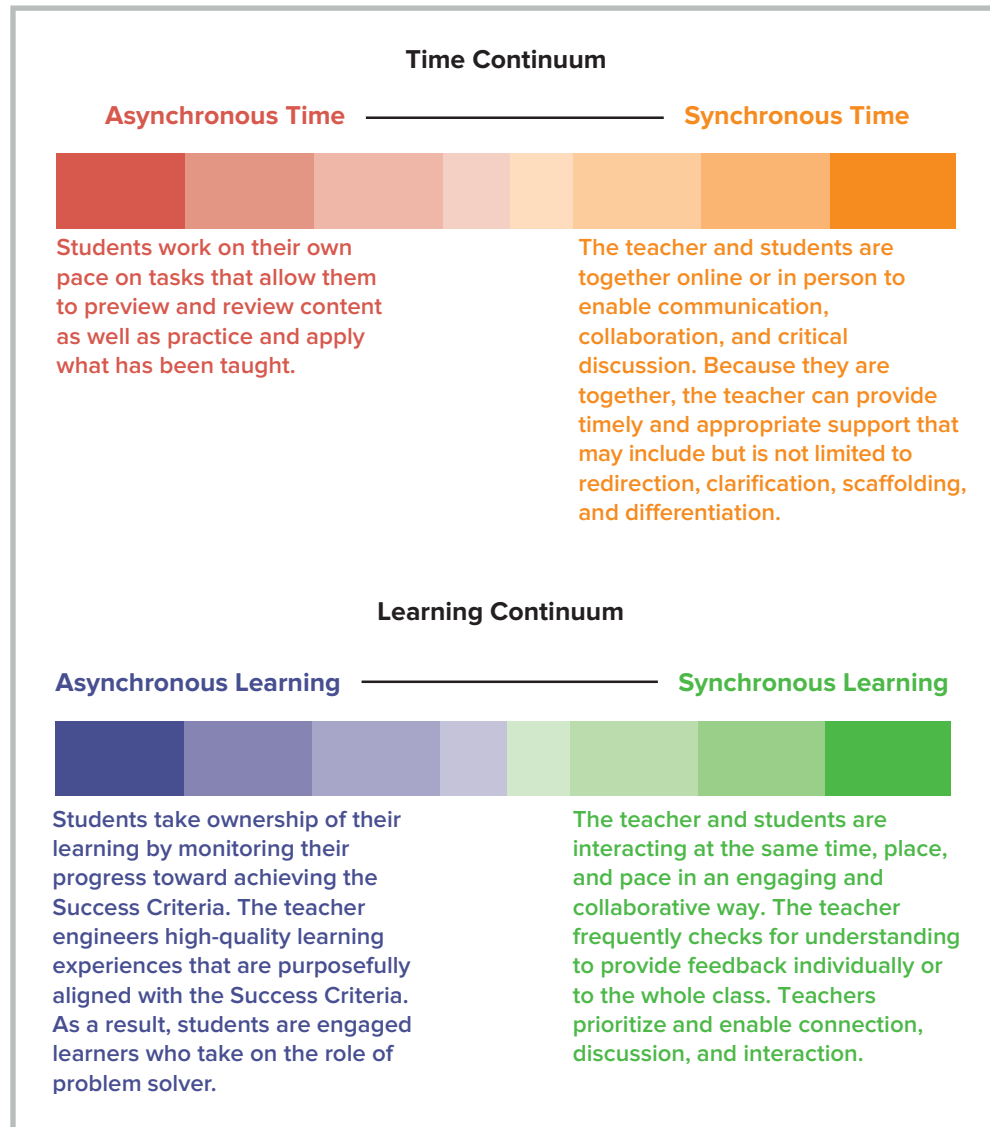
Sometimes in simultaneous learning, the Roomies can see the Zoomies, but the Zoomies can't see the Roomies. In other cases, the teacher can see the Roomies and Zoomies and each group of students can also see each other. The Roomies are logged into their computer with the Zoomies (on the same Zoom session). Or the teacher can use the document camera and point it at the room to show a classroom view. The teacher can then engage with both groups of students at the same time. This allows the teacher to foster community among the two groups and eases the amount of preparation that a teacher may have to do to meet the needs of both groups separately.

At Sunset Valley High School, Ms. Marquez starts each day with a shortened schedule where she meets with all of her U.S. government classes on Zoom. Learners at Sunset Valley High School attend all four of the classes for approximately 30 minutes each, as Zoomies. In the afternoon, half of her U.S. government students come to school as

Roomies, while the other half engages in asynchronous, distance learning. Tomorrow, they will switch places. In this model, the Roomies do not have the opportunity to interact with the Zoomies. For both Ms. Lewanowicz and Ms. Marquez, they must think about their approaches to teaching and learning in a different way—blending together their thinking about face-to-face learning with their thinking about learning at a distance. The next page provides examples of reflective questions that Ms. Lewanowicz and Ms. Marquez use to guide their thinking and decisions about designing and implementing rigorous and engaging experiences in a simultaneous learning environment.

In reality, there is a continuum in terms of time and learning (see Figure 1.3) for asynchronous and synchronous learning.

1.3 ASYNCHRONOUS AND SYNCHRONOUS TIME AND LEARNING CONTINUUM



Source: Fontana Unified School District Elementary Instruction Team (2020).

Reflective Questions for Teaching Roomies and Zoomies

- What are my students learning?
- Why are they learning this?
- What does success look like?
- What approaches or strategies will I use to engage face-to-face learners *simultaneously* with my distance learners?
- How will I foster community between both sets of students?
- What aspects of the learning are best suited for asynchronous learning?
- What aspects of the learning are best suited for synchronous learning?
- How will I scaffold teaching and learning to ensure learners are appropriately challenged?
- How will I encourage feedback from my distance learners?
- Finally, how will I monitor student learning in my face-to-face learners *simultaneously* with my distance learners?

We will take a close look at each of these questions in the chapters that follow. Teaching and learning in the simultaneous learning environment does not require that we reinvent the wheel or throw everything out and start over. Instead, we must work collaboratively with our PLCs, instructional technology department, instructional leadership teams, content-area colleagues, or grade-level planning teams to combine what has worked in both face-to-face and distance learning environments. After all, the definition of *simultaneous learning* uses the term *combine*. Let's combine the best parts of both as we continue to move learning forward. Again, this may be stressful at the start, but possible. Let's start by looking at the different models of simultaneous learning. One of these models may match the particular approach in your district or school, while some of you may find this list helpful in deciding the particular approach you might take in the near future.

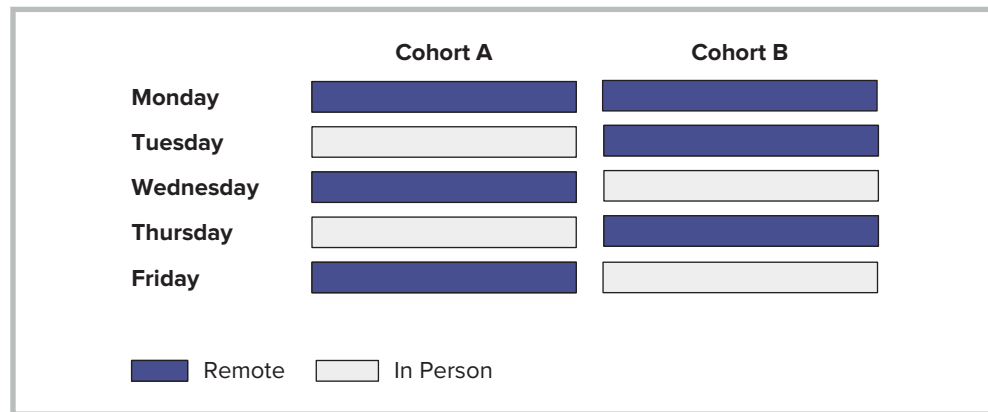
DIFFERENT MODELS OF SIMULTANEOUS LEARNING



There are many different models of simultaneous learning, each of which reflects adaptations based on the local context of the district or school. A one-size-fits-all approach does not necessarily accommodate the needs of the students or teachers or may not be realistic given the challenges associated with transportation, technology, materials,

and supplies. While describing every possible permutation of face-to-face and distance learning for implementing simultaneous learning would be impossible, we wanted to look at three specific models that are most common.

A–B Model



Let's return to Ms. Lewanowicz, the third-grade teacher from Cherrywood Elementary School. Her school has implemented the A–B model for simultaneous learning. On Monday, all learners are engaged in asynchronous, distance learning. Learners are provided a learning progression and the necessary resources through the school division's learning management system, Canvas. These tasks include a variety of review tasks from the previous week or experiences that are designed to activate and identify prior or background knowledge. The specific details of these tasks will be further explored in subsequent chapters. For the purposes of understanding the A–B model, this day is set aside for asynchronous learning while all teachers, including Ms. Lewanowicz and her third-grade team, engage in planning, professional learning, and essential meetings (e.g., Individualized Education Plans or IEP meetings and parent–teacher conferences).

For the remainder of the week, learners are divided into two different groups based on which of the remaining two days of the week they are face-to-face and which two days they are learning at a distance (see Figure I.4). For example, some students attend face-to-face on Tuesdays and Thursdays (the A Group) while other students attend face-to-face on Wednesdays and Fridays (the B Group). What makes this particular model a simultaneous learning model is that when the A Group is engaged in face-to-face learning, the B Group is engaged in synchronous and asynchronous distance learning. As you may recall, Ms. Lewanowicz projects her Zoomies on the interactive whiteboard so that her Roomies can see their peers.

I.4 THE A-B MODEL FOR SIMULTANEOUS LEARNING

	Monday	Tuesday	Wednesday	Thursday	Friday
A Group	Asynchronous, distance learning	Face-to-face learning	Synchronous and asynchronous, distance learning	Face-to-face learning	Synchronous and asynchronous, distance learning
B Group	Asynchronous, distance learning	Synchronous and asynchronous, distance learning	Face-to-face learning	Synchronous and asynchronous, distance learning	Face-to-face learning

For the A-B model, Ms. Lewanowicz and her colleagues at Cherrywood Elementary School are moving between

- ➔ Asynchronous, distance learning
- ➔ Face-to-face learning combined with synchronous learning
- ➔ Face-to-face learning combined with asynchronous learning

Those last two approaches are what make this model a simultaneous learning model. While we highlighted this model in an elementary classroom, this model has also been implemented in both middle schools and high schools.

Split Day Model

	AM		PM	
	Cohort A	Cohort B	Cohort A	Cohort B
Monday	Remote	Remote	In Person	Remote
Tuesday	Remote	Remote	Remote	In Person
Wednesday	Remote	Remote	In Person	Remote
Thursday	Remote	Remote	Remote	In Person
Friday	Remote	Remote	In Person	Remote

Remote
 In Person

Now recall the high school U.S. government teacher, Ms. Marquez. The split day model for simultaneous learning splits the day in half, along with which group of students are learning at a distance and which group of students are engaged in synchronous learning. Sunset Valley High School uses a 4 × 4 block. For the faculty at Sunset Valley High School, every day starts with synchronous distance learning for all learners. Instead of the traditional 90-minute blocks, learners log on to Google Meets for 30 minutes for each class. The day and week are then split. For example, on Monday, half of the students transition to face-to-face learning for the remainder of the school day. The other half of the students participate in asynchronous learning.

On Tuesday, the day begins just as it did on Monday with shortened 4 × 4 block synchronous learning sessions on Google Meets for all learners. However, on Tuesday, the group of learners who previously engaged in asynchronous learning spends the afternoon in face-to-face learning. Those who were face-to-face on Monday engage in asynchronous, distance learning. This is an example of what some school districts may refer to as hybrid learning. The students are learning in two different learning environments (see Figure I.5).

I.5 THE SPLIT DAY FOR SIMULTANEOUS LEARNING

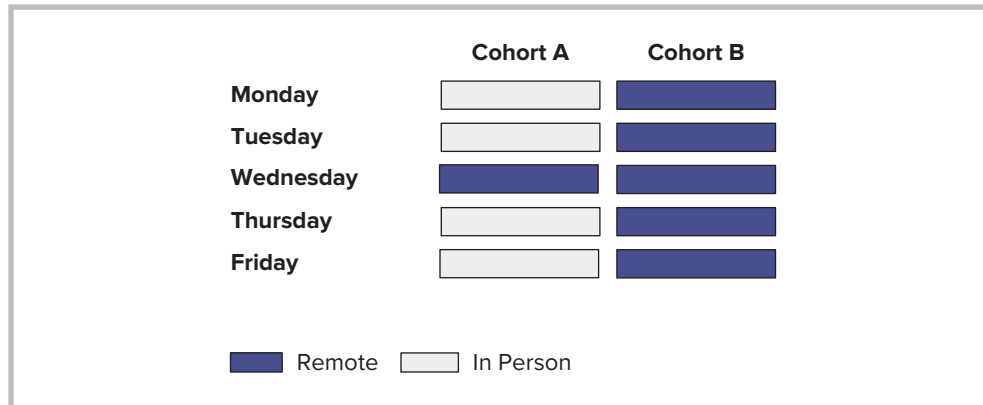
	Monday	Tuesday	Wednesday	Thursday	Friday
AM	All learners engaged in synchronous, distance learning	All learners engaged in synchronous, distance learning	All learners engaged in synchronous, distance learning	All learners engaged in synchronous, distance learning	All learners engaged in synchronous, distance learning
PM	<p>Half of the learners in face-to-face learning</p> <p>Half of the learners in asynchronous, distance learning</p>	<p>Half of the learners in face-to-face learning</p> <p>Half of the learners in asynchronous, distance learning</p>	<p>Half of the learners in face-to-face learning</p> <p>Half of the learners in asynchronous, distance learning</p>	<p>Half of the learners in face-to-face learning</p> <p>Half of the learners in asynchronous, distance learning</p>	<p>Half of the learners in face-to-face learning</p> <p>Half of the learners in asynchronous, distance learning</p>

For the split day, Ms. Marquez and her colleagues at Sunset Valley High School are moving between

- ➔ Synchronous, distance learning
- ➔ Face-to-face learning combined with asynchronous learning

The learning that occurs in the afternoon of each day is what makes this model a simultaneous learning model. While we highlighted this model in a 4 × 4 block high school, this model has been implemented in elementary schools, middle schools, and high schools that operate using different scheduling models. We will look more at the planning and implementation of these learning experiences soon.

Full Week Model



The final model we want to highlight usually develops as a result of the school division or district providing a choice to their learners and their families. For example, Sanchez Independent School District (ISD) surveyed all of their families, asking if they preferred that their child or children attended school face-to-face or if they preferred to engage in distance learning. Based on the responses and their ability to accommodate each family's preferences, learners that wished to physically come to school were allowed to do so four days out of the week. Those learners who requested to take part in learning from a distance were allowed to do so as well. Given that this particular model involves simultaneous learning each day of the week, Sanchez ISD decided to make Wednesday an asynchronous, distance learning day (see Figure I.6). Much like the A–B model, Wednesday was set aside for teachers to engage in planning, professional learning, and essential meetings (e.g., Individualized Education Plans or IEP meetings and parent–teacher conferences).

I.6 THE FULL WEEK MODEL FOR SIMULTANEOUS LEARNING

	Monday	Tuesday	Wednesday	Thursday	Friday
Face-to-Face Group	Face-to-face learning	Face-to-face learning	Asynchronous, distance learning	Face-to-face learning	Face-to-face learning
Distance Learning Group	Synchronous and asynchronous, distance learning	Synchronous and asynchronous, distance learning	Asynchronous, distance learning	Synchronous and asynchronous, distance learning	Synchronous and asynchronous, distance learning

For the full week model, teachers and students engage in

- ➔ Asynchronous, distance learning
- ➔ Face-to-face learning combined with synchronous learning
- ➔ Face-to-face learning combined with asynchronous learning

As with the previous two models, the full week model works at any grade level.



LET'S NOT DOUBLE THE WORK

Simultaneous learning is the combination of distance learning and face-to-face learning in the same learning experience. Unfortunately, this has led to the belief, and often the practice, of doubling the workloads of families, instructional leaders, teachers, and our students. Combining two approaches to teaching and learning must not result in an additive approach to designing and implementing rigorous and engaging experiences that move learning forward. Trying to teach two different sets of students is both stressful and unsustainable. As we have continued to emphasize, simultaneous learning requires an entirely different conversation. For example, the conversation around clarity and planning should not be about planning twice—once for distance learning and once for face-to-face. Likewise, when fostering and sustaining active student engagement, we should not treat distance and face-to-face learners as mutually exclusive groups. And finally, how we monitor student learning should reflect both contexts. Simultaneously teaching Roomies *and* Zoomies may be stressful, but it is possible when we also extract and then implement what works best from both distance learning and face-to-face learning environments. Then, and only then, can Ms. Lewanowicz, Ms. Marquez, and the teachers in Sanchez ISD find this approach possible, if stressful.

Now, let's look closer at clarity and planning for simultaneous learning. The intentional, deliberate, and purposeful planning in simultaneous learning ensures we maximize teaching and learning in the combined teaching of some learners at a distance and others face-to-face learning during the same learning experience.

**WHEN FOSTERING
AND SUSTAINING
ACTIVE STUDENT
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WE SHOULD NOT
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